

National Aeronautics and  
Space Administration

**Lyndon B. Johnson Space Center**  
2101 NASA Parkway  
Houston, Texas 77058-3696



APR 21 2008

Reply to Attn of: EA3-08-047

TO: PSRP Executive Secretary, NE12  
FROM: EA321/AMS Project Manager  
SUBJECT: AMS-02 request for clarification on MLI from PSRP

This letter is requesting a clarification of applicable requirements and expectations of the Flight Payload Safety Review Panel (PSRP) with regards to the flight safety of the Alpha Magnetic Spectrometer-02 (AMS-02).

In the AMS-02 flight hazard report AMS-02-F04, over pressurization of the Payload Bay, the AMS-02 Project has implemented control 6.1 that states:

*"All MLI and thermal blankets used on the AMS-02 will be secured to AMS using positive mechanical means. "Soft": techniques such as hook and loop fasteners (Velcro ®) will not be used as a primary means of retaining the MLI and thermal blankets."*

This control was included because it was understood by the project to be a standard safety control imposed by the PSRP, which was confirmed by the panel during the review.

The project has received two pieces of GFE hardware from the ISS Program which utilize thermal blankets that are held on entirely by hook and loop fasteners and have no positive means of retention. These items are the Power Video Grapple Fixture and the Berthing Camera System. These hardware systems have been provided as flight-qualified systems and have a standard integration procedure which must be followed. NASA policy does not allow the AMS-02 Project to modify the GFE, so we are in a situation where we can not enforce the control 6.1 completely.

This project seeks to clarify whether there is in fact a requirement for providing a positive structural retention of thermal blankets and MLI so that they do not block the payload bay vents and whether this requirement also applies to the GFE provided to the project.

A handwritten signature in black ink, appearing to read "Trent Martin", with a stylized, flowing script.

Trent Martin

cc:  
ESCG/EA2/L. Hill  
ESCG/EA2/J. C. Tutt  
GHG/NE/K. R. Chavez  
GHG/NE/P. A. Mensingh  
GHG/NE/R. B. Rehm  
GHG/NE /D. M. Santiago